

Notice of Allowability

Application No.

10/086,757

Examiner

Sara M. Hanne

Applicant(s)

LAHTI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Afterfinal amendment filed 7/18/05.
2. ☒ The allowed claim(s) is/are 1-12, 14-28, 30-43 and 45-48.
3. ☒ The drawings filed on 2/28/02 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Steven J. Laureanti on 8/3/05.
3. In the specification, amend the paragraph appearing at page 1, lines 1-6, as follows:

RELATED APPLICATIONS

This application claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Application Nos. 60/300,240 and 60/300,276, both filed June 22, 2001.

This application is related to co-pending U.S. Application Nos. 09/551,899 filed April 19, 2000; 09/948,500 filed September 6, 2001; and 40/____,____ 10/086,761 filed February 28, 2002 (~~Attorney Docket 020431-0964~~). 2002.

4. In the claims, make amendments to Claims 1, 5-7, 12, 17, 21-23, 28, 32, 36-38, 43, and 48 as seen in the full set of claims below.

1. A system for automatically updating graphical user interface (GUI) elements at a client system according to an updated state of a configuration, the system comprising one or more software components at the client system operable to:

display a GUI element at the client system in connection with a configuration workflow, the GUI element being associated with one or more configuration choices

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being available for a configuration element of a configuration model stored at a server system;

create and maintain at the client system a ~~connector~~ connector, using a format string comprising JavaScript code to link linking a property of the configuration element of the configuration model to the GUI element;

maintain at the client system configuration data representing a current state of a configuration in relation to the configuration model;

in response to a configuration choice selection at the GUI element during the configuration workflow, receive data from the server system representing an update to the current state of the configuration with respect to the property of the configuration element; and

use the connector linking the property of the configuration element to the GUI element to cause other GUI elements to be automatically updated to reflect the updated state of the configuration with respect to the property of the configuration element in order to associate available configuration choices for the other GUI elements according to the configuration choice selection.

2. The system of Claim 1, wherein the connector is created automatically at the client system in response to the GUI element being generated for display at the client system.

3. The system of Claim 1, wherein the connector allows other GUI elements to be automatically updated to reflect the updated state of the configuration without requiring data associated with any properties of any configuration elements unaffected by the configuration choice selection to be communicated from the server system to the client system and without requiring any GUI elements unaffected by the update to be updated.

4. The system of Claim 1, wherein:

the configuration model comprises a plurality of configuration elements, each configuration element involving one or more configuration choices each having one or more configuration element properties; and

the software components are further operable to create and maintain at the client system a separate connector for each configuration element property that is to be linked to one of a plurality of GUI elements, such that each configuration element property may be linked to one or more GUI elements using separate connectors and each GUI element may be linked to one or more configuration element properties using separate connectors.

5. ~~The system of Claim 1, wherein code used to create the connector at the client system comprises a format string as a parameter,~~ the format string allowing for Hypertext Markup Language (HTML) formatting of the GUI element linked to the connector according to the format string.

6. ~~The system of Claim 1, wherein code used to create the connector at the client system comprises a format string comprising JavaScript code,~~ the format string ~~allowing:~~ allows for:

the updated state of the configuration to be determined in response to the configuration choice selection associated with the GUI element linked to the connector; and

if appropriate according to the updated state of the configuration, a different Hypertext Markup Language (HTML) class to be used for displaying the GUI element linked to the connector.

7. ~~The system of Claim 1, wherein code used to create the connector at the client system comprises a format string comprising JavaScript code,~~ the format string allowing allows information associated with a configuration element specified in the format string to be obtained and used.

8. The system of Claim 1, wherein the software components are further operable to create and maintain at the client system:

- a connector linking specified Hypertext Markup Language (HTML) layer content to a JavaScript function, the connector operable to be used to call the JavaScript function in response to the configuration choice selection associated with the HTML content to indicate the configuration choice selection;

- a connector linking a specified HTML layer property to the JavaScript function, the connector operable to be used to call the JavaScript function in response to the configuration choice selection associated with the HTML layer to indicate the configuration choice selection; and

- a connector linking the JavaScript function to a callback operable to communicate the configuration choice selection to the server system and, in response, receive the data representing the update from the server system.

9. The system of Claim 1, wherein the one or more software components comprise:

- a first frame associated with a web page and generated at the server system for communication to the client system upon initiation of the configuration workflow, the first frame operable to:

 - maintain the connector at the client system;

 - store the data representing the update to maintain configuration data representing the updated current state of the configuration at the client system;

 - according to the data representing the update, determine the property of the configuration element;

 - determine the connector for the property; and

 - using the connector for the property, update other GUI elements linked to the property; and

- a second frame associated with the web page and generated at the server system for communication to the client system in association with the first frame, the second frame comprising at least one of the other GUI elements linked to the property.

10. The system of Claim 9, further comprising a third frame associated with the web page and generated at the server system for communication to the client system in association with the first and second frames, when executed at the client system the third frame operable to:

receive from the second frame data representing a configuration choice selection associated with at least one of the other GUI elements, the configuration choice selection of the second frame affecting the property of the associated configuration element;

post the data received from the second frame as a Hypertext Transfer Protocol (HTTP) request to the server system;

receive an HTTP response from the server system comprising data reflecting the update to the current state of the configuration resulting from the configuration choice selection of the second frame; and

communicate the data received from the server system to the second frame to initiate updating of other GUI elements for the third frame.

11. The system of Claim 9, wherein the system consists of the web page comprising the first and second frames.

12. The system of Claim 1, wherein the one or more software components comprise:

a first frame associated with a web page comprising a JavaServer Page (JSP) and generated at the server system for communication to the client system upon initiation of the configuration workflow, the first frame comprising a plurality of JavaScript functions each operable when executed at the client system in response to a call to create a connector for a corresponding type of GUI element; and

a second frame associated with the web page comprising a JSP and generated at the server system for communication to the client system in association with the first frame, the second frame comprising a JavaScript code associated with the GUI element and operable to, in response to the GUI element being initially generated for display,

automatically call the JavaScript function in the first frame that corresponds to the type of the GUI element to create the connector for the GUI element.

14. The system of Claim 1, wherein the one or more software components comprise:

a first non-viewable configuration application program interface (API) frame associated with a web page and generated at the server system for communication to the client system in response to initiation of the configuration workflow; and

one of a plurality of second viewable configuration dialog frames associated with the web page and generated at the server system for communication to the client system in association with the first frame in response to initiation of the configuration workflow.

15. The system of Claim 1, wherein the configuration is a configuration for a product, the configuration choice is associated with one or more configuration elements available for selection in configuring a corresponding portion of the product, and the configuration model is a product configuration model.

16. The system of Claim 1, wherein the GUI element is associated with a dynamic Hypertext Markup Language (DHTML) layer and comprises one of a text label, a text field, a text area, a radio button, a drop-down list box, a check box, and an image.

17. A method for automatically updating a graphical user interface (GUI) element at a client system according to an updated state of a configuration, comprising:

displaying a GUI element at the client system in connection with a configuration workflow, the GUI element being associated with one or more configuration choices for a configuration element of a configuration model stored at a server system;

creating and maintaining at the client system a ~~connector~~ connector, using a format string comprising JavaScript code to link linking a property of the configuration element of the configuration model to the GUI element;

maintaining at the client system configuration data representing a current state of a configuration in relation to the configuration model;

in response to a configuration choice selection at the GUI element during the configuration workflow, receiving data from the server system representing an update to the current state of the configuration with respect to the property of the configuration element; and

using the connector linking the property of the configuration element to the GUI element to cause other GUI elements to be automatically updated to reflect the updated state of the configuration with respect to the property of the configuration element in order to associate available configuration choices for the other GUI elements according to the configuration choice selection.

18. The method of Claim 17, wherein the connector is created automatically at the client system in response to the GUI element being generated for display at the client system.

19. The method of Claim 17, wherein the connector allows other GUI elements to be automatically updated to reflect the updated state of the configuration without requiring data associated with any properties of any configuration elements unaffected by the configuration choice selection to be communicated from the server system to the client system and without requiring any GUI elements unaffected by the update to be updated.

20. The method of Claim 17, wherein:

the configuration model comprises a plurality of configuration , each configuration element involving one or more configuration choices each having one or more configuration element properties; and

the method further comprises creating and maintaining at the client system a separate connector for each configuration element property that is to be linked to one of a plurality of GUI elements, such that each configuration element property may be

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linked to one or more GUI elements using separate connectors and each GUI element may be linked to one or more configuration element properties using separate connectors.

21. The method of Claim 17, wherein ~~code used to create the connector at the client system comprises a format string as a parameter,~~ the format string allowing for Hypertext Markup Language (HTML) formatting of the GUI element linked to the connector according to the format string.

22. The method of Claim 17, wherein ~~code used to create the connector at the client system comprises a format string comprising JavaScript code,~~ the format string allowing: allows for:

the updated state of the configuration to be determined in response to the configuration choice selection associated with the GUI element linked to the connector; and

if appropriate according to the updated state of the configuration, a different Hypertext Markup Language (HTML) class to be used for displaying the GUI element linked to the connector.

23. The method of Claim 17, wherein ~~code used to create the connector at the client system comprises a format string comprising JavaScript code,~~ the format string allowing allows information associated with a configuration element specified in the format string to be obtained and used.

24. The method of Claim 17, further comprising creating and maintaining at the client system:

a connector linking specified Hypertext Markup Language (HTML) layer content to a JavaScript function, the connector operable to be used to call the JavaScript function in response to the configuration choice selection associated with the HTML content to indicate the configuration choice selection;

a connector linking a specified HTML layer property to the JavaScript function, the connector operable to be used to call the JavaScript function in response to the configuration choice selection associated with the HTML layer to indicate the configuration choice selection; and

a connector linking the JavaScript function to a callback operable to communicate the configuration choice selection to the server system and, in response, receive the data representing the update from the server system.

25. The method of Claim 17, further comprising:

loading at the client system a first frame associated with a web page and generated at the server system for communication to the client system upon initiation of the configuration workflow, the first frame operable to:

maintain the connector at the client system;

store the data representing the update to maintain configuration data representing the updated current state of the configuration at the client system;

according to the data representing the update, determine the property of the configuration element;

determine the connector for the property; and

use the connector for the property to update other GUI elements linked to the property; and

loading at the client system a second frame associated with the web page and generated at the server system for communication to the client system in association with the first frame, the second frame comprising at least one of the other GUI elements linked to the property.

26. The method of Claim 25, further comprising loading at the client system a third frame associated with the web page and generated at the server system for communication to the client system in association with the first and second frames, when executed at the client system the third frame operable to:

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receive from the second frame data representing a configuration choice selection associated with the at least one of the other GUI elements, the configuration choice selection of the second frame affecting the property of the associated configuration element;

post the data received from the second frame as a Hypertext Transfer Protocol (HTTP) request to the server system;

receive an HTTP response from the server system comprising data reflecting the update to the current state of the configuration resulting from the configuration choice selection of the second frame; and

communicate the data received from the server system to the second frame to initiate updating of other GUI elements for the third frame.

27. The method of Claim 25, wherein:

the first frame comprises a non-viewable configuration application program interface (API) frame; and

the second frame is one of a plurality of viewable configuration dialog frames associated with the web page and generated at the server system for communication to the client system in association with the first frame in response to initiation of the configuration workflow.

28. The method of Claim 17, further comprising:

loading at the client system a first frame associated with a web page comprising a JavaServer Page (JSP) and generated at the server system for communication to the client system upon initiation of the configuration workflow, the first frame comprising a plurality of JavaScript functions each operable when executed at the client system in response to a call to create a connector for a corresponding type of GUI element; and

loading at the client system a second frame associated with the web page comprising a JSP and generated at the server system for communication to the client system in association with the first frame, the second frame comprising a JavaScript code associated with the GUI element and operable to, in response to the GUI element

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being initially generated for display, automatically call the JavaScript function in the first frame that corresponds to the type of the GUI element to create the connector for the GUI element.

30. The method of Claim 17, wherein the configuration is a configuration for a product, the configuration choice is associated with one or more configuration elements available for selection in configuring a corresponding portion of the product, and the configuration model is a product configuration model.

31. The method of Claim 17, wherein the GUI element is associated with a dynamic Hypertext Markup Language (DHTML) layer and comprises one of a text label, a text field, a text area, a radio button, a drop-down list box, a check box, and an image.

32. Software for automatically updating graphical user interface (GUI) elements at a client system according to an updated state of a configuration, the software being embodied in computer-readable media and when executed operable to:

display a GUI element at the client system in connection with a configuration workflow, the GUI element being associated with one or more configuration choices for a configuration element of a configuration model stored at a server system;

create and maintain at the client system a ~~connector~~ connector, using a format string comprising JavaScript code to link linking a property of the configuration element of the configuration model to the GUI element;

maintain at the client system configuration data representing a current state of a configuration in relation to the configuration model;

in response to a configuration choice selection at the GUI element during the configuration workflow, receive data from the server system representing an update to the current state of the configuration with respect to the property of the configuration element; and

use the connector linking the property of the configuration element to the GUI element to cause other GUI elements to be automatically updated to reflect the updated state of the configuration with respect to the property of the configuration element.

33. The software of Claim 32, wherein the connector is created automatically at the client system in response to the GUI element being generated for display at the client system.

34. The software of Claim 32, wherein the connector allows other GUI elements to be automatically updated to reflect the updated state of the configuration without requiring data associated with any properties of any configuration elements unaffected by the configuration choice selection to be communicated from the server system to the client system and without requiring any GUI elements unaffected by the update to be updated.

35. The software of Claim 32, wherein:
the configuration model comprises a plurality of configuration elements, each configuration element involving one or more configuration choices each having one or more configuration element properties; and

the software is further operable to create and maintain at the client system a separate connector for each configuration element property that is to be linked to one of a plurality of GUI elements, such that each configuration element property may be linked to one or more GUI elements using separate connectors and each GUI element may be linked to one or more configuration element properties using separate connectors.

36. The software of Claim 32, wherein ~~code used to create the connector at the client system comprises a format string as a parameter,~~ the format string allows for Hypertext Markup Language (HTML) formatting of the GUI element linked to the connector according to the format string.

37. The software of Claim 32, wherein ~~code used to create the connector at the client system comprises a format string comprising JavaScript code~~, the format string allowing: allows for:

the updated state of the configuration to be determined in response to the configuration choice selection associated with the GUI element linked to the connector; and

if appropriate according to the updated state of the configuration, a different Hypertext Markup Language (HTML) class to be used for displaying the GUI element linked to the connector.

38. The software of Claim 32, wherein ~~code used to create the connector at the client system comprises a format string comprising JavaScript code~~, the format string ~~allowing~~ allows information associated with a configuration element specified in the format string to be obtained and used.

39. The software of Claim 32, further operable to create and maintain at the client system:

a connector linking specified Hypertext Markup Language (HTML) layer content to a JavaScript function, the connector operable to be used to call the JavaScript function in response to the configuration choice selection associated with the HTML content to indicate the configuration choice selection

a connector linking a specified HTML layer property to the JavaScript function, the connector operable to be used to call the JavaScript function in response to the configuration choice selection associated with the HTML layer to indicate the configuration choice selection and

a connector linking the JavaScript function to a callback operable to communicate the configuration choice selection to the server system and, in response, receive the data representing the update from the server system.

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40. The software of Claim 32, comprising:

a first frame associated with a web page and generated at the server system for communication to the client system upon initiation of the configuration workflow, the first frame operable to:

maintain the connector at the client system;

store the data representing the update to maintain configuration data representing the updated current state of the configuration at the client system;

according to the data representing the update, determine the property of the configuration element;

determine the connector for the property; and

using the connector for the property to update other GUI elements linked to the property; and

a second frame associated with the web page and generated at the server system for communication to the client system in association with the first frame, the second frame comprising at least one of the other GUI elements linked to the property.

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41. The software of Claim 40, further comprising a third frame associated with the web page and generated at the server system for communication to the client system in association with the first and second frames, when executed at the client system the third frame operable to:

receive from the second frame data representing a configuration choice selection associated with the GUI element, the configuration choice selection of the second frame affecting the property of the associated configuration element;

post the data received from the second frame as a Hypertext Transfer Protocol (HTTP) request to the server system;

receive an HTTP response from the server system comprising data reflecting the update to the current state of the configuration resulting from the configuration choice selection of the second frame; and

communicate the data received from the server system to the second frame to initiate updating of at least one of the other GUI elements for the third frame.

42. The software of Claim 40, wherein the software consists of the web page comprising the first and second frames.

43. The software of Claim 32, comprising:

a first frame associated with a web page comprising a JavaServer Page (JSP) and generated at the server system for communication to the client system upon initiation of the configuration workflow, the first frame comprising a plurality of JavaScript functions each operable when executed at the client system in response to a call to create a connector for a corresponding type of GUI element; and

a second frame associated with the web page comprising a JSP and generated at the server system for communication to the client system in association with the first frame, the second frame comprising a JavaScript code associated with the GUI element and operable to, in response to the GUI element being initially generated for display, automatically call the JavaScript function in the first frame that corresponds to the type of the GUI element to create the connector for the GUI element.

45. The software of Claim 32, comprising:

a first non-viewable configuration application program interface (API) frame associated with a web page and generated at the server system for communication to the client system in response to initiation of the configuration workflow; and

one of a plurality of second viewable configuration dialog frames associated with the web page and generated at the server system for communication to the client system in association with the first frame in response to initiation of the configuration workflow.

46. The software of Claim 32, wherein the configuration is a configuration for a product, the configuration choice is associated with one or more configuration elements available for selection in configuring a corresponding portion of the product, and the configuration model is a product configuration model.

47. The software of Claim 32, wherein the GUI element is associated with a dynamic Hypertext Markup Language (DHTML) layer and comprises one of a text label, a text field, a text area, a radio button, a drop-down list box, a check box, and an image.

48. A system for automatically updating graphical user interface (GUI) elements at a client system according to an updated state of a configuration, comprising:

means for displaying a GUI element at the client system in connection with a configuration workflow, the GUI element being associated with one or more configuration choices for a configuration element of a configuration model stored at a server system;

means for creating and maintaining at the client system a ~~connector~~ connector, using a format string comprising JavaScript code to link linking a property of the configuration element of the configuration model to the GUI element;

means for maintaining at the client system configuration data representing a current state of a configuration in relation to the configuration model;

means for receiving, in response to a configuration choice selection at the GUI element during the configuration workflow, data from the server system representing an update to the current state of the configuration with respect to the property of the configuration element; and

means for using the connector linking the property of the configuration element to the GUI element to cause other GUI elements to be automatically updated to reflect the updated state of the configuration with respect to the property of the configuration element in order to associate available configuration choices for the other GUI elements according to the configuration choice selection.

5. Please Cancel Claims 13, 29 and 44.

Allowable Subject Matter

6. Claims 1-12, 14-28, 30-43 and 45-48 are allowed over the prior art of record.

7. The following is an examiner's statement of reasons for allowance: The Prior art does not teach or fairly suggest the subject matter of these claims. Independent Claims 1, 17, 32, and 48, when considered as a whole, are allowable over the prior art of record. Specifically, prior art of record fails to clearly teach or suggest the method of using a connector using JavaScript code to link a property of a configuration element to a configuration model such that a configuration choice made for a configuration element associated with the GUI automatically update other GUI elements to reflect an updated state of configuration in the independent claims. While the prior art of record shows methods that present information on the screen dependent upon the selections of other

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GUI elements, they do not show the connector using JavaScript code so that it may automatically update other GUI elements upon an updated configuration state.

Dependent claims 2-12, 14-16, 18-28, 30-31, 33-43 and 45-47 further add limitations to the allowable subject matter of the respective independent claims, thus are also allowable.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

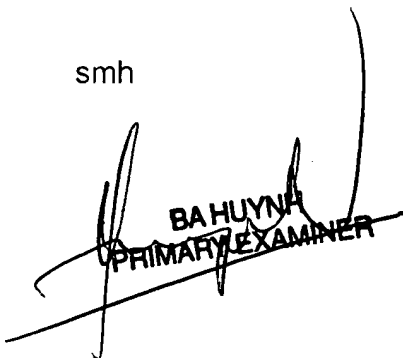
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara M. Hanne whose telephone number is (571) 272-4135. The examiner can normally be reached on M-F 7:30am-4:00pm, off on alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WEILUN LO can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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BA HUYNH
PRIMARY EXAMINER